Multi-Room Digital Video Recorder (DVR)

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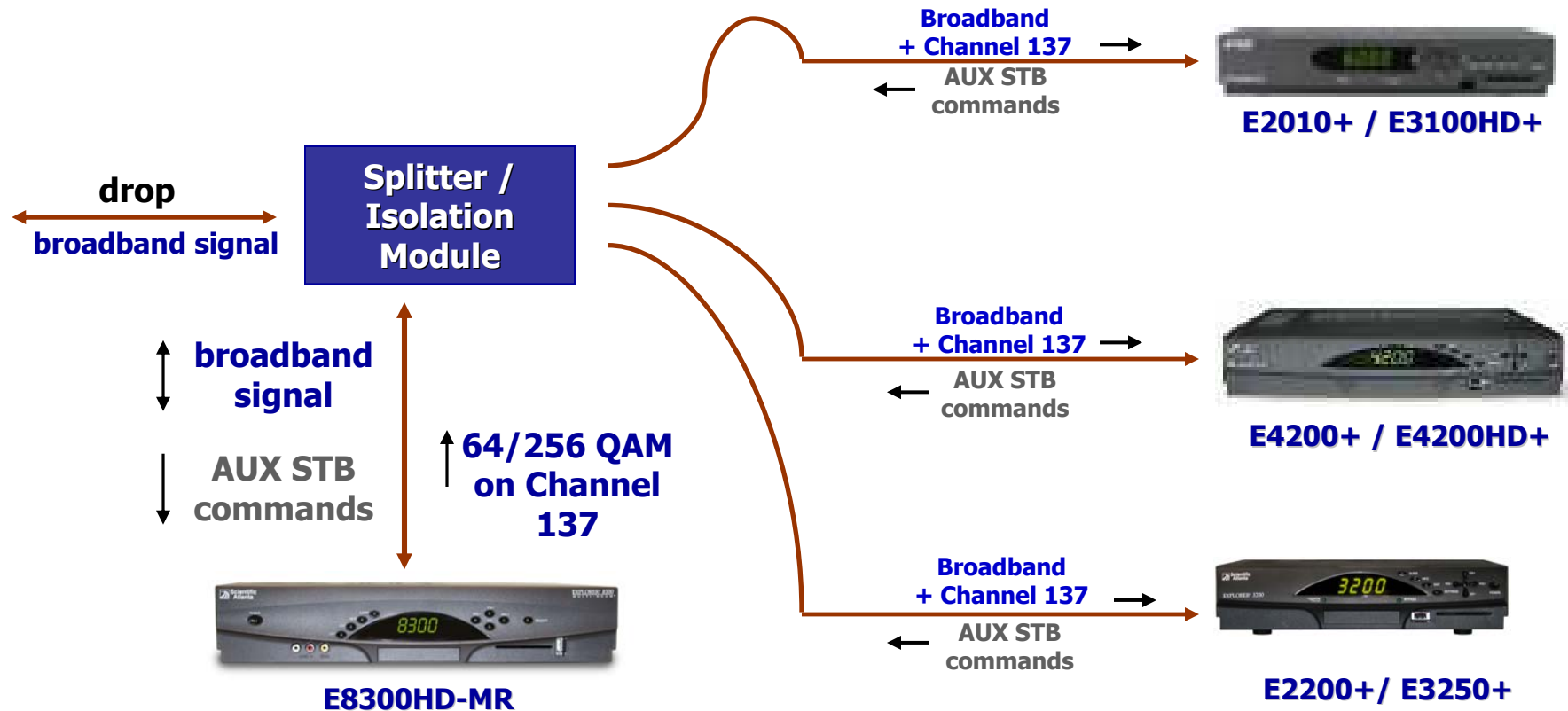
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Set Top Box (STB) Copy Protection

- Digital content delivered from network using PowerKEY Conditional Access System (CAS)

- Outputs use copy protection according to Broadcast Flag rules.
  - HDCP (DVI and HDMI outputs)
  - DTCP (IEEE 1394)
  - Macrovision (Optional on NTSC outputs)
  - CGMS-A (Analog Component)
  - Broadcast Flag passed through

- Copy Protection bits carried securely via PowerKEY.

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Multi-room DVR

- Subscriber service that allows up to 3 other TVs in the home to access and playback content stored on the Explorer 8300 DVR
- Supported on all legacy S-A STBs via software download
- Same simple user interface for accessing the recorded list on all set-tops
- Pause, rewind and fast forward modes are supported on playback from all set-tops
- Ability to access recordings in progress on non-E8300 set-tops

Explorer 8300-MR: Multi-Room DVR

Splitter / Isolation Module

drop
broadband signal

broadband signal

AUX STB commands

64/256 QAM on Channel 137

E8300HD-MR

Broadband + Channel 137
AUX STB commands
E2010+ / E3100HD+

Broadband + Channel 137
AUX STB commands
E4200+ / E4200HD+

Broadband + Channel 137
AUX STB commands
E2200+/ E3250+

DVR Conditional Access

- **PowerKEY CAS encrypts digital content delivered to all STBs (DVR and non-DVR).**
  - Uses RSA public key infrastructure to deliver permissions and exchange authenticated keys with each STB.
- **DVR decrypts content from network and re-encrypts content (3DES) for storage on HDD using STB specific PowerKEY keys.**
  - HDD can not be moved to another STB.
- **External HDD supported through SATA interface using same STB specific keys.**

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Multi-Room Conditional Access

- Uses existing PowerKEY CAS infrastructure
- Client must be authorized by operator via PowerKEY for MR-DVR service
- DVR securely exchanges encryption keys with client STB on request.
- DVR delivers content via QAM to client STB using 3DES PowerKEY encryption.
- Client provides same copy protection for content as though it was real time broadcast.

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